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planning for a better community landscape

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PLANNING FOR A BETTER COMMUNITY LANDSCAPE

BY W. R. NELSON, JR., AND J. A. PORTER¹

BEFORE YOU BEGIN planning the development of any land for a community improvement project, you should have a clear understanding of the general principles and objectives of site planning. It is important that structures, roads, parking areas, walks, and landscape elements have a pleasing and efficient relationship to the land on which they are located. Ideally your project, whether it be a hospital, a new school, a church, or a park, should appear as an integrated union of land and man-made features.

With large earth-moving equipment generally available, the first impulse in starting to develop a site is usually to clear and level the land. However, by retaining the original topographical and landscape features of the land as much as possible, you will not only save the expenses of leveling it, but you will also retain natural features that will enhance the appearance of your project.

A site analysis plan, prepared by a landscape architect, will evaluate all parts of the site and will enable the architect or designer to take full advantage of the existing character of the land in preparing construction plans for your project. Location of buildings, roads, utilities, and drainage facilities will be planned to keep expenses of construction and, eventually, maintenance at a minimum. Soil samples should be taken to determine if the land will adequately support the foundations of your planned buildings and roads. Through site planning trees and ground features can be retained as far as is practicable. A sample plan of a preliminary site analysis is shown on page 4.

Remember that natural features are assets that are difficult, if not impossible, to duplicate. Their preservation will add interest to your project area and the site will blend with surrounding topography. The natural ground plane should be modified only when such modification will definitely benefit the project or is necessary for reasons of human comfort or safety.

So far we have been emphasizing the desirability of retaining the natural ground plane. Sometimes, however, the ground plane is so basically level that it is difficult to avoid monotonous, unappealing designs. This is especially true in many parts of the Midwest. If you encounter this problem in your project, you can often solve it, at least

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partially, by using the earth as sculptural material, creating mounds and undulations at strategic places on your site. This will give some visual relief to the monotony of a completely level site.

You must also think of the land in terms of use areas such as building sites, service areas, roads, walks, parking areas, and open space. The landscape architect will have to know your requirements for these various use areas so that he can carefully design the ground plane to accommodate them all in the best possible way. The landscape architect should prepare a grading design which will locate the various components of your project on the site with minimal disturbance of the site's topography. Buildings should be placed to take advantage of winter sunlight, prevailing summer winds, and scenic views. They should also be set far enough apart to provide adequate light and air circulation. Streets should be designed to provide adequate room for vehicular movement within the project and safe entry and exit. Utilities should be planned to provide enough power, water, and drainage facilities for your greatest anticipated requirements. Power and telephone lines should be placed underground if possible.

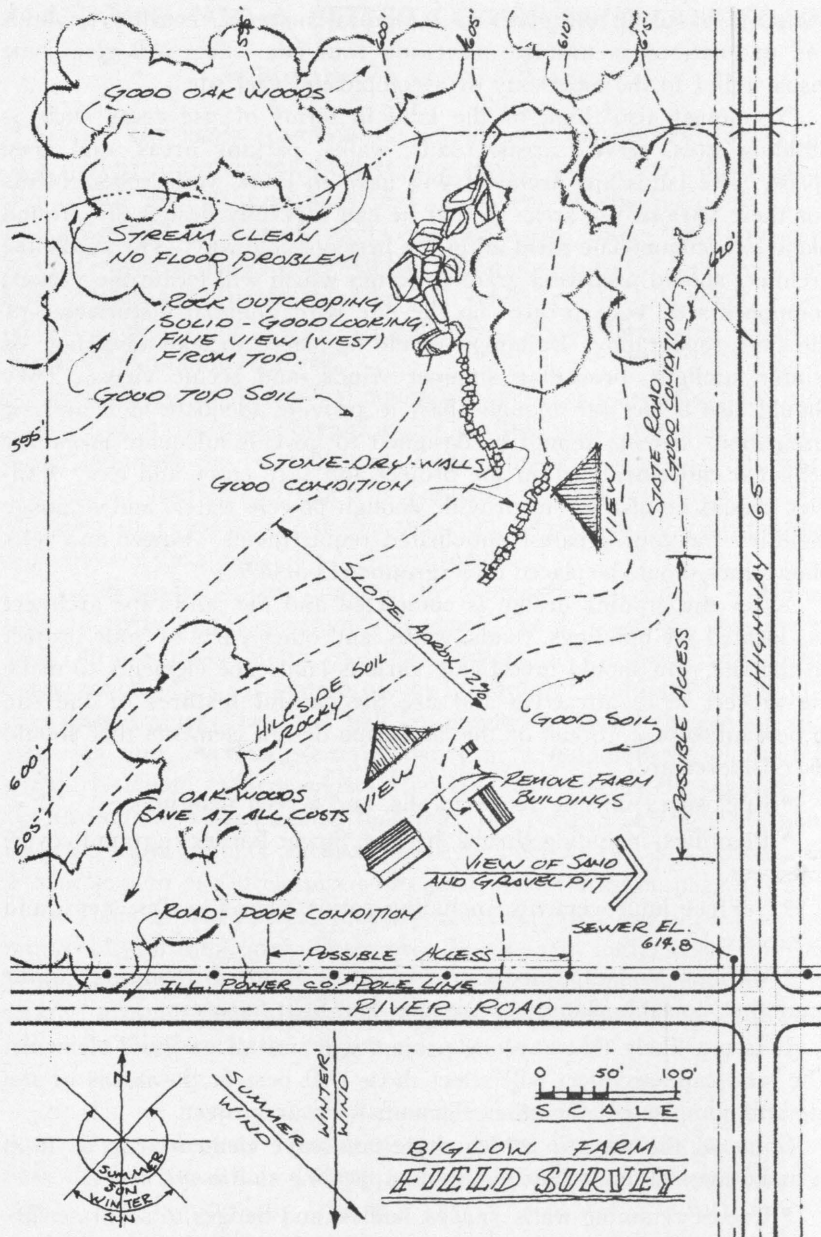
After the grading design is completed and the landscape architect has located the buildings, roads, walks, and other parts of your project on the site, you should investigate various landscape elements to make the project more attractive and use the natural features of the site to best advantage. Some of the landscape design elements that should be considered are:

- Enclosures such as fences, walls, and screen plantings.
- Plantings, including shrubs, hedges, flower borders, ground cover, and trees.
- Surface improvements, including patios, plazas, walks, steps, and terraces.
- Various landscape accessories such as outdoor furniture, water fountains, portable planters, sculpture, and light fixtures.

It is not likely that any one project will use all of these elements. The landscape architect will select those that best fit the needs of the site and complement the other elements of your project.

Some of the ways in which these landscape elements can be used to make the site more functional and appealing to the eye are:

- Use of retaining walls, fences, baffles, and hedges to separate different parts of the project. A service area might be separated from a public reception area in this way, for example.



A field site analysis for use in preliminary site planning. Such a survey shows existing physical features such as views, buildings, utilities, roads, and the wind direction, and has a sun diagram.

- Use of graded, ramp-like, grass-covered areas to connect different levels of your site.

- Construction of patios and plazas for relaxation of employees or visitors. Benches might be placed around a central water feature, for example.

The amount of open space available on your site will largely determine the extent to which you can use these landscape elements. Remember, however, that too many different landscape elements or haphazard placement of them will make the project look cluttered and disorganized.

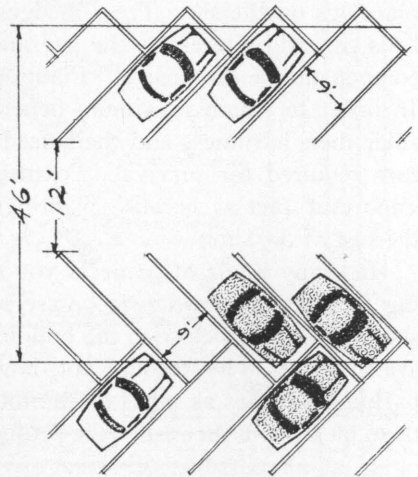
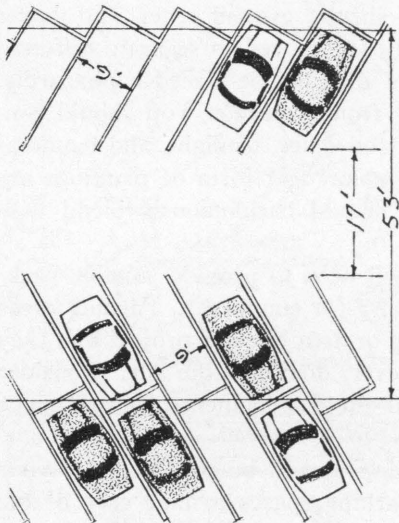
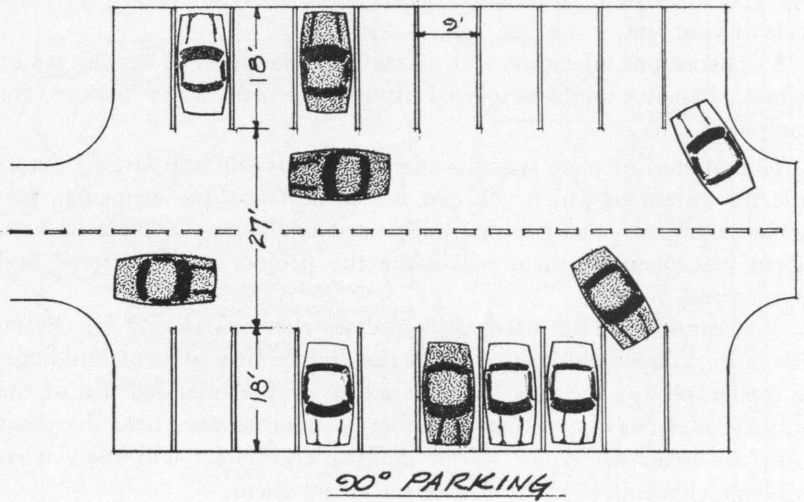
Structural materials used as landscape elements should be chosen with care. You should keep in mind the architecture of your buildings, the topography of the site, and the nature of the intended use of the landscape element in question. Economy of maintenance over the years is also an important factor. Your landscape architect will know what landscape elements to use and where to place them.

You should also enhance the appearance of the project by placing plantings on the site. Trees, hedges, shrubs, ground cover, and flower beds can add interest to the site and can be used to separate different components of the project. Plantings must not be placed haphazardly. In order to obtain maximum benefit from plantings, you should consider their hardiness and their needs for water, sunlight, and temperature required for survival. Texture, color, and form of plantings are important factors because plantings should harmoniously blend with the rest of the site.

In many kinds of projects you will need to provide suitable parking facilities for customers or users and for employees. Parking areas should be located close to the building or area of your project that they are to serve. They should not, however, dominate the site. Consider parking facilities as parts of the total site development plan and make them blend with the rest of the project.

If at all possible, off-street parking should be provided for your project. Plan to construct enough parking spaces to take care of the average peak load of daily traffic. Also plan entrances and exits for the safe and efficient arrival and departure of cars. The size and shape of your parking area will largely determine the type of parking-area design you will use.

Several different parking area designs are illustrated on page 6. You can see that the number of cars that can be parked at a given curb length increases as the angle at which the cars are parked in-



Right-angle parking (top) works well when space is available since it allows two-way traffic in the lot. Angle parking should be used with one-way traffic patterns. The bottom drawings show that 45° parking will fit into a narrower space than 60° parking but the 45° lot will have to be longer to accommodate the same number of cars.

creases. But a greater parking angle also requires more room for cars to maneuver in and out of parking spaces. The following table gives approximate space requirements for various parking angles in a lot:

Position of car at curb.....	30°	45°	60°	90°
Width of parking stall (feet).....	9	9	9	9
Curb space per stall (feet).....	18	13	10.5	9
Depth of stall (feet)	17	17	18	18
Width of aisle for maneuvering (feet)...	9	12	17	27

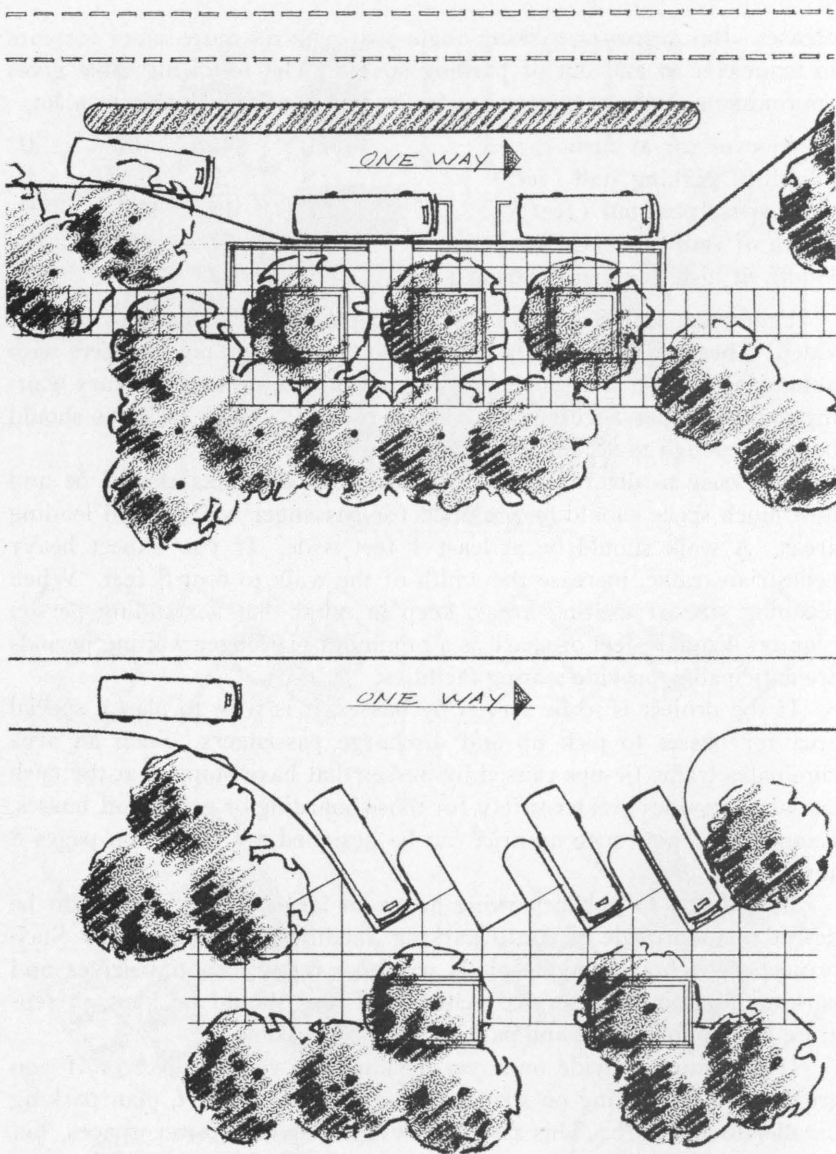
Pedestrian walks to serve the parking facility will have to be provided. These walks should be planned so that they do not interfere with automobile traffic. Passenger loading areas and an area for cars waiting to pick up passengers might also be required. Such facilities should be large enough to accommodate peak rush-hour traffic.

It is easy to determine how wide pedestrian walks should be and how much space should be provided for passenger waiting and loading areas. A walk should be at least 4 feet wide. If you expect heavy pedestrian traffic, increase the width of the walk to 6 or 8 feet. When planning size of waiting areas, keep in mind that a standing person requires 4 square feet of space as a minimum. If longer waiting periods are anticipated, provide seating facilities.

If the project is to be served by busses, it is wise to plan a special area for busses to pick up and discharge passengers. Such an area eliminates traffic tie-ups caused by busses that have stopped at the curb and also provides greater safety for those boarding or getting off busses. Examples of how such an area can be designed are shown on pages 8 and 9.

In addition to public parking areas, in larger projects it might be desirable to provide separate parking facilities for employees. Such projects as schools and hospitals will also require special drives and parking facilities for service vehicles. These should be kept as separate from public roads and parking areas as possible.

If you must provide on-street parking for your project or if you are improving parking on streets of the business district, plan parking parallel to the curb. This parking design provides fewer spaces, but it is safer. It also uses less total street width for storage of cars and leaves more for movement of traffic. Ideally, a street with parking allowed on it should be six lanes wide—two lanes for continuous traffic movement, two for parking, and two for cars to maneuver in and out of parking spaces. This is illustrated on page 10.

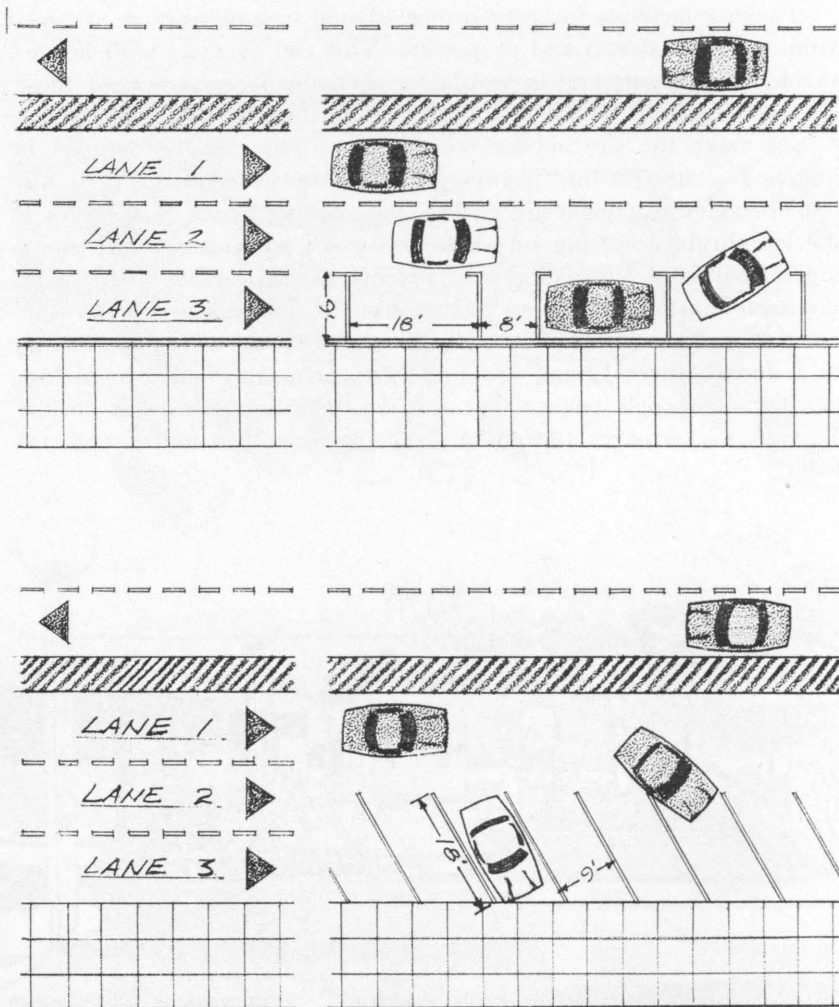


Two designs for off-street bus loading areas. The upper drawing shows a loading area that provides safe and pleasant waiting facilities for passengers as well as rapid arrival and departure of busses. The lower drawing illustrates a loading zone that accommodates more busses but also requires more room for maneuvering because busses have to back out of parking stalls.

Parking facilities for your project should in some way be screened from adjacent streets and properties. This can be done with hedges, shrubs, trees, structural materials, or a combination of any of these. Use of a single element—a hedge of uniform height, for example—can make the site appear monotonous. This can be avoided by breaking a straight-line planting by trees or evergreens. It is also not necessary to completely enclose the parking area. Some trees in the lot, shrubs accenting entrances and exits, and interspersed groupings of border shrubs will greatly improve the appearance of the parking area. Earth mounds can also be used as screening. A good combination to use is earth mounds and plantings. Illustrations of this may be found on pages 12 and 13. Trees are often not planted in parking lots because people believe that valuable parking spaces will be lost. Illustrations on pages 14 and 15 show that this need not be the case.



A public bus loading area. Such a facility provides seats, shade, and protection from street traffic for people waiting for busses. This kind of waiting area is especially useful in shopping centers, larger industrial areas, schools, and other places where there is considerable demand for public transportation. This large a facility would not be required at all bus stops although similar, but smaller, waiting areas can be provided.

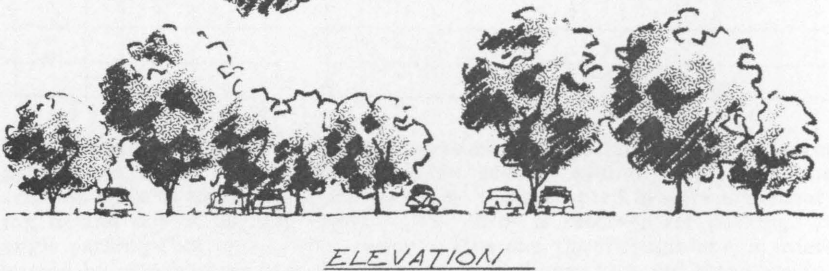
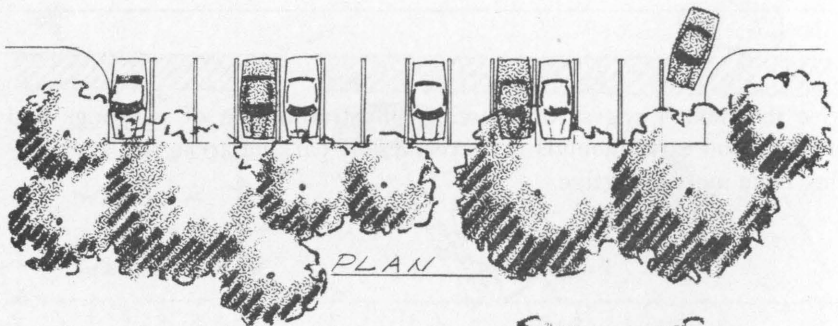
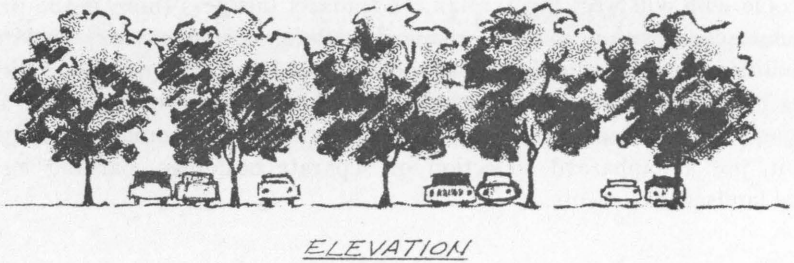
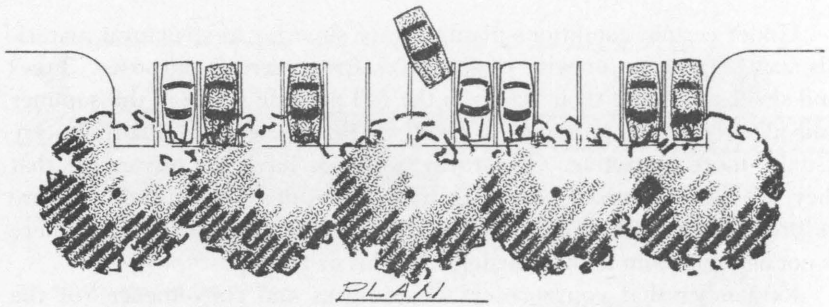


These illustrations show the effect of parallel street parking and angle street parking on traffic flow. With use of the parallel system (top), lane one remains open to traffic. Traffic in lane two is interrupted by cars maneuvering in and out of parking spaces. Lane three is reserved for parking. If angle parking (bottom) is used, traffic in lane one, the through lane, is interrupted by cars backing out of parking spaces. Lanes two and three are reserved for parking. Although angle parking allows more cars to be parked in a given area, it is least desirable because of the traffic congestion it causes.

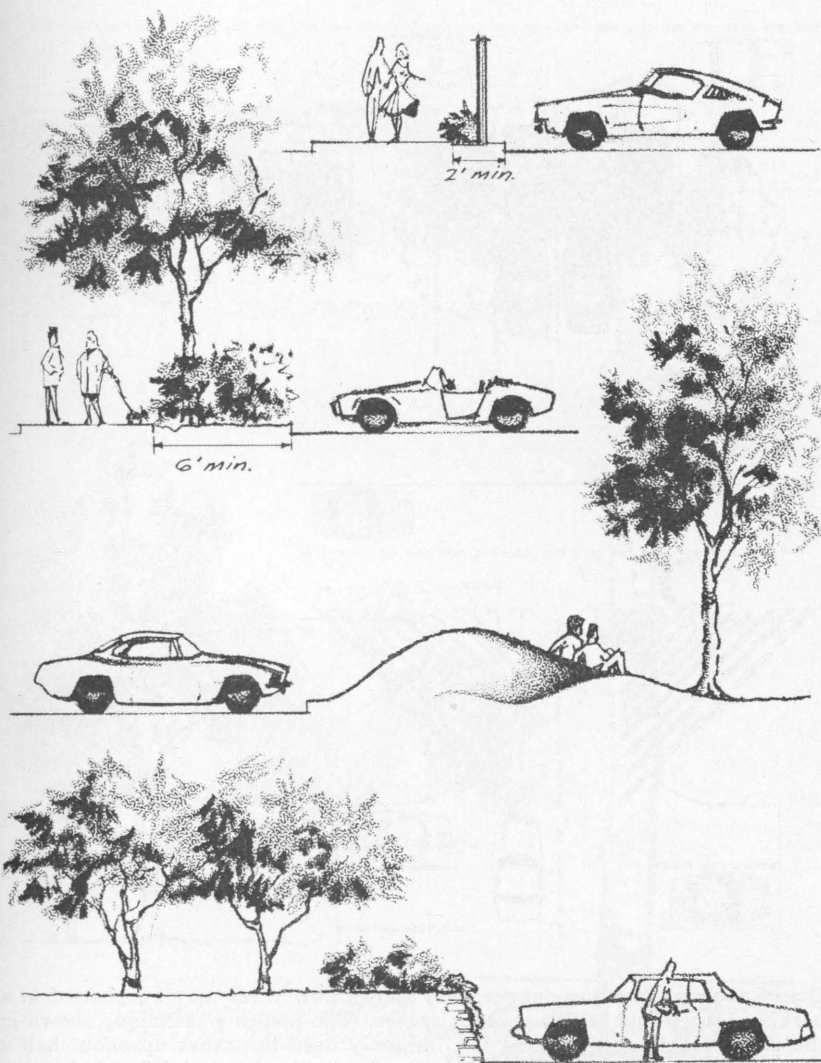
Under certain conditions plantings are superior to structural materials such as wooden or wire mesh fences for screening purposes. Trees and shrubs that lose their leaves in the fall provide shade in the summer and allow the sun to melt snow and ice in the winter. Plantings are usually more attractive. Structural materials have the advantage that they provide immediate screening while plantings must usually mature before they are effective as screens. Fencing is also useful when there is not enough room to plant hedges, shrubs, or trees.

Remember that your project's usefulness and convenience for the people who will work, live, relax, or transact business there is the primary consideration in your plan. Landscape elements and parking facilities, as well as buildings, should be placed and designed to provide the best possible use of the site from the human point of view. At all times keep in mind that your project, when finished, should be a single unit, not a haphazard collection of separate buildings, parking lots, and landscape elements.

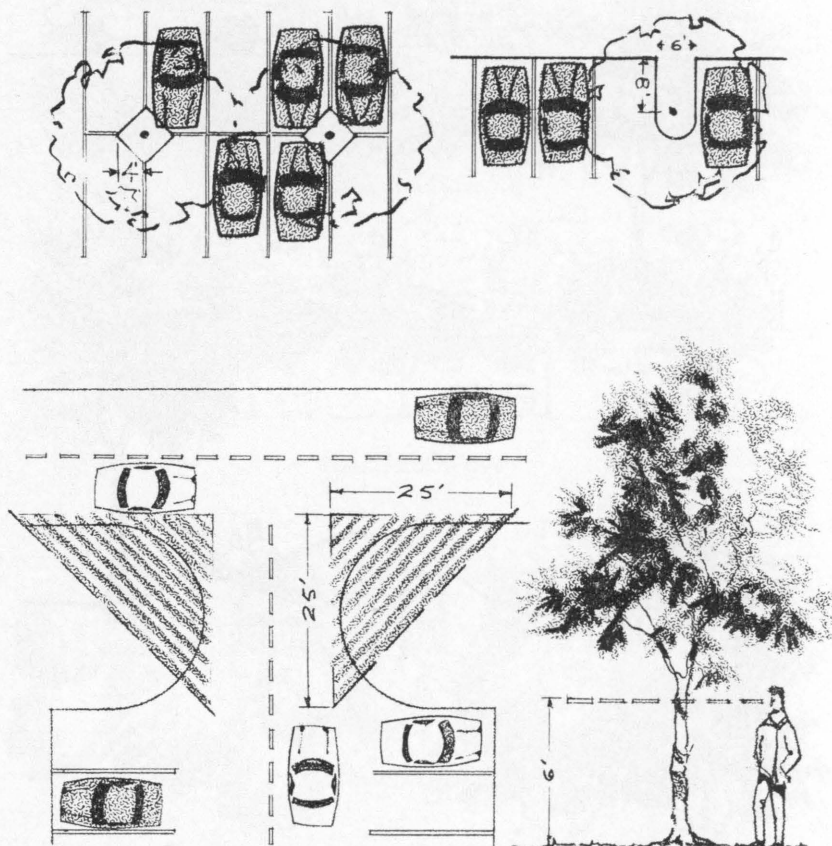
See the next 4 pages for drawings illustrating use of plantings and fencing and earth mounds for screening of parking areas and for making them more attractive.



Trees in a parking lot may be planted either in rows (top) or in a random arrangement. Row planting is simpler but may become monotonous. Random planting requires more space and careful planning but it will result in a more pleasing effect. Random planting also allows a variety of trees to be used.



Fencing in a parking lot (top) provides quick screening, takes little space, and requires minimum maintenance. Be sure to place the fence far enough from the wheel stops to allow for bumper overhang. Plantings used as screening soften the harsh effect of the pavement and provide shade. Earth mounds and changes of elevation (bottom) can also be used in parking lots. Such mounds should appear to be a natural part of the landscape. If any parking areas are constructed below the normal earth level, be sure that drainage for the lot is provided.



Diamond-point planting (upper left) shows how trees may be planted in a parking lot without losing parking spaces. The planting technique shown in the upper right-hand drawing is commonly used but takes up about half a parking space per tree. The shaded areas in the lower left-hand drawing designate space that should be left free of plantings in order to aid motorists' vision. The figure at lower right shows that tree branches should not be any lower than 6 feet from the ground so as not to obstruct vision.

Urbana, Illinois

March, 1966

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